AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A communication quality management method of multicasting data from a distribution server to ~~a plurality of~~ reception terminals via a router connected to a network, ~~characterized by comprising the steps of:~~the method comprising:

receiving a multicast packet from the distribution server;

adding quality information to <u>the</u>a multicast packet ~~distributed from the distribution server~~;

<u>retransmitting the multicast packet with the added quality information via the router;</u>

acquiring the quality information from the multicast packet distributed via the router; and

distributing, to the reception terminal, the multicast packet from which the quality information is removed.

2. (currently amended): ~~A~~<u>The</u> communication quality management method according to claim 1, ~~characterized by further comprising the step of~~<u>wherein adding quality information comprises:</u>

adding the quality information as a quality information header ~~in~~<u>between</u> ~~an IP header,~~<u>a</u> user datagram protocol (UDP)~~UDP~~ header~~,~~ and stream data of ~~a~~<u>the</u> multicast packet<u>, which is distributed</u> from the distribution server.

3. (currently amended): ~~A~~<u>The</u> communication quality management method according to claim 1, ~~characterized by further comprising the step of~~<u>wherein adding quality information comprises:</u>

adding the quality information before a~~a~~ the multicast packet, which is distributed from the distribution server, as an IP header, a UDP header, and a quality information header.

4. (currently amended): ~~A~~ The communication quality management method according to claim 1, ~~characterized by further comprising the step of~~ wherein the quality information comprises ~~containing~~ packet loss information, distribution delay information, and fluctuation information ~~in the quality information~~.

5. (currently amended): ~~A~~ The communication quality management method according to claim 1, ~~characterized by~~ further comprising: ~~the step of~~

saving, ~~as database~~ for each reception terminal, the quality information acquired from the multicast packet in a database.

6. (currently amended): A communication quality management apparatus for multicasting data from a distribution server to ~~a plurality of~~ reception terminals via a router connected to a network, ~~characterized by~~ the apparatus comprising:

a server proxy arranged between the distribution server and the router to add quality information to a multicast packet received from the distribution server and retransmit the multicast packet with the added quality information via the router;

a reception terminal proxy arranged between the router and the reception terminal and including

a quality information acquisition unit which acquires, from the multicast packet, the quality information added by said server proxy and

a quality information calculation/transmission unit, said reception terminal proxy distributing, to the reception terminal, the multicast packet from which the quality information is removed; and

an accumulation server which receives and accumulates the quality information from said reception terminal proxy.

7. (currently amended): A-The communication quality management apparatus according to claim 6, characterized in that further comprising:

a quality information database storing which stores, for each reception terminal, the quality information processed by the quality information calculation/transmission unit acquired, calculated, and received by said accumulation server, the database being is connected to said accumulation server.

8. (currently amended): A-The communication quality management apparatus according to claim 6, characterized in that further comprising:

a quality management server which receives packet quality information from said accumulation server and sets QoS of the router, the quality management server being is connected to said accumulation server.

9. (new): The method according to claim 1, wherein acquiring comprises:

removing the quality information from the multicast packet by a reception terminal proxy coupled between each corresponding reception terminal and the router;

performing quality information calculations and data processing by the reception terminal proxy;

transferring the processed quality information from each reception terminal proxy to an accumulation server coupled to the router; and

accumulating the transferred quality information in a database.

10. (new): A communication quality management apparatus for multicasting data from a distribution server to reception terminals via a router connected to a network, the apparatus comprising:

a server proxy arranged between the distribution server and the router to add quality information as a quality information header to a multicast packet received from the distribution server and retransmit the multicast packet with the added quality information via the router;

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reception terminal proxies arranged between the router and corresponding reception terminals, which reception terminal proxies distribute the multicast packet to the reception terminals, the reception terminal proxies including:

a quality information acquisition unit, which removes the quality information header from the multicast packet, acquires the quality information from the quality information header, and distributes the multicast packet, from which the quality information header is removed, to the corresponding reception terminal, and

a quality information calculation/transmission unit, which processes the acquired quality information and calculates results based on the processed quality information; and

an accumulation server which receives and accumulates the quality information and the calculation results from each reception terminal proxy for each of the reception terminals.